DRAFT

ARIZONA DEPARTMENT of TRANSPORTATION

FREEWAY COORDINATION ISSUES & STRATEGIES
For
TRANSPORTATION PLANNING

January 29, 2003

FREEWAY COORDINATION ISSUES & STRATEGIES
For
TRANSPORTATION PLANNING

TABLE of CONTENTS

I.	INTRODUCTION	3
II.	FREQUNTLY ASKED QUESTIONS	4 & 7
III.	CATEGORIES	8 - 19
IV	REFERENCES	20

FREEWAY COORDINATION ISSUES & STRATEGIES
For
TRANSPORTATION PLANNING

INTRODUCTION

As one of the Arizona Department of Transportation's (ADOT) Core Business Functions is "to develop and operate the transportation infrastructure" for the State of Arizona.

This document serves as a point of reference and information for local governments and developers working in the MAG Region. The challenge for ADOT is to give local governments and developers a better understanding of ADOT's roles and responsibilities as we plan, design, construct, and maintain our freeway corridors.

This compilation of issues & strategies further illustrate the vast communication, coordination, and responsibility we share in this effort. This document is in no way intended to establish policy, processes, or barriers for the way ADOT conducts business with local governments and developers, it is to be a point of reference and information.

If you should have any questions, comments, or concerns with the information contained herein, please contact Andrew Smith, ADOT-Transportation Planning Division (602) 712-7870.

FREEWAY COORDINATION ISSUES & STRATEGIES
For
TRANSPORTATION PLANNING

FREQUENTLY ASKED QUESTIONS (FAQs)

Right-of-way

How long does it normally take to acquire right of way and relocate occupants of the acquired property?

Generally speaking, from receipt of design requirements identifying the right of way to be acquired to completion of the acquisition process, it takes at least six months to acquire right of way. This process can easily extend to nine or twelve months with special requirements in the acquisition or if the right-of-way is being acquired from a public agency or Native American community. There are numerous steps in the acquisition process that have more or less established and predictable timeframes, i.e. preparation of (Right-of-way) R/W plans, appraisal of required right-of-way, negotiation, condemnation.

Relocation, although linked with the acquisition process, is somewhat different in that it can involve a property owner and/or a tenant of the acquired property requiring separate negotiations. Relocation benefits must be determined for the displaced party(s) and a suitable replacement location secured and occupied. All displaced parties received a minimum of 90 days to move. More complex moves, involving large businesses, can take one or two years to complete.

How does ADOT value the right of way to be acquired?

Every property, or interest, that is acquired receives at least one appraisal to establish the fair market value at the time of acquisition. This appraisal is a comprehensive narrative analysis of the property involved, taking into consideration all influences and impact on the property, including impact on the remainder property if it is a partial acquisition. Each property is appraised individually, and the owner is invited to accompany the appraiser on a physical inspection of the property. The appraiser must select data for his report that will reflect the true value of the property and not a value that may have changed because the property is located in a highway corridor. Each appraisal is reviewed separately by a senior review appraiser to ensure proper procedures are followed.

How much time is the property owner allowed to consider the Department's offer?

The Department makes every effort to work with each property owner so they have sufficient time to consider the state's offer, and to present alternative information if desired. Each project has its particular timeframe and schedule dictating the time allowed for the property owner to consider the offer., Typically an owner is able to consider the offer for 70 days before the acquisition proceeds to condemnation.

What if the property owner doesn't agree with the Department's offer?

The Department's acquisition agent will accept whatever information the owner can give to support a different value. This information goes back to the Department's appraiser to see if an adjustment is called for. In some instances, R/W Management, after considering the conditions of the acquisition and the project, will authorized a payment over the amount of the appraisal, called an administrative settlement. If such a settlement is not warranted, the Department will exercise its power of eminent domain and acquire the needed property through court action. The Department will usually be granted possession of the property at a court hearing, pending deposit of funds in court. The owner may then withdraw up to his equity interest. The court will determine the actual amount of compensation at a later date,

What does ADOT do with property it doesn't use for a project (excess land)?

Any property determined to be unnecessary for Department purposes is sold according to the processes dictated by state lawThis may involve a public auction at which the property is sold to the highest bidder (exceeding the amount of the Department's appraisal of the property), or under certain circumstances, sold directly to an abutting property owner. (Is selling to an abutting property owner the departments first choice?) Excess property also may be exchanged for right of way needed for construction.

How does Right of Way know what properties to acquire?

Right of Way receives design, or right of way, requirements from the ADOT or the consultant team designing the project. These requirements identify the areas needed for the highway project and that must be acquired by the R/W Group. Initially the designs are very preliminary, only 10% complete, but subsequent refinements increase the accuracy to 30%, 60%, and 95% accuracy. From this

(95% design information?) design information, right of way plans are created that delineate ownership, areas to be acquired, and other features of the project.

How is it decided whether to purchase all or part of a property?

If the project design requires all of a property, it will be acquired in its entirety. If most of the property is needed and a small uneconomic remainder parcel is left, state statute authorizes the Department to purchase the entire parcel. If the appraisal of the partial acquisition determines that the remainder property is damaged economically then damages would be paid to the owner that equals or exceeds the value of the remainder, the Department will also offer to purchase the remainder. If the remainder is viable on its own and there are no significant damages, it will not be acquired.

How soon in the development process can right of way be purchased?

Right-of-way can be purchased when it can be determined that the property, or part of property, is needed for the project, and when funds for the purchase are available.

What circumstances can justify advance acquisition of right of way?

First, the fact that the property is required for a project must be established . The property owner must be able to demonstrate that he or she is experiencing severe hardship that can only be alleviated by the sale of their property. They must also demonstrate that the property cannot be sold because of the impending highway project. The Department may also purchase a property to forestall development that would make acquiring the property at a later date more expensive. Of course, funding for the advance purchase must be available.

What areas in the development process pose the largest problems for Right-Of-Way Group?

As mentioned above, Right of Way is designated as necessary in a design concept report, preferably at 30% design.. Given that it takes about six months to complete the right of way acquisition process, the right-of-way requirements should be accurate and not subject to change. If changes to the design are necessary after the initial right-of-way definition, and right of way acquisition is underway or completed, the six-month process must begin again for acquisition of any properties added by the change. This threatens the project schedule and construction bid date. Lead-time to complete acquisition and relocation can be

predicted with a degree of accuracy, but changes and additions at a later stage of the process will create problems for Right of Way acquisition.

What is the difference between "abandoning" and "vacating" a highway or portion of a highway?

If a roadway is abandoned, that portion of the roadway that is abandoned is transferred to the incorporated city or town or to the County in which it is located as prescribed by ARS 28-7207. If a roadway is vacated, that portion that is vacated goes to the adjacent property owner or owners.

- **UTILITY COORDINATION FAQs**

Why must I pay for installation of facilities (other than relocations, i.e., enhancements) before they are installed?

Article IX Section 7 of the state constitution prohibits the state from lending its credit or making a gift to a private entity, such as a utility company. Thus, where the state is doing work for the benefit of the utility where there are no prior rights, it is necessary that the utility furnish the money up front. Otherwise, it would be a violation of this article and section of the state constitution.

Must I pay for sleeving my non-pressurized liquid utility across the Controlled Access?

ADOT will pay for sleeving lines carrying pressurized liquid having prior rights. Other sleeves are for the convenience of accessing the utility after the freeway is constructed and are considered an enhancement.

What type of "rights" will I have when my facilities have been relocated?

ADOT will replace the rights you have today with replacement rights that have the same effect as the rights that originally existed. Anything more is considered a betterment.

FREEWAY COORDINATION ISSUES & STRATEGIES
For
TRANSPORTATION PLANNING

CATEGORIES

- **IDENTIFICATION OF RIGHT OF WAY NEEDS**
  (Acquisition Issues)

♦ Acquire right of way early enough to allow timely utility relocation.
  a) Normal time frame for right of way acquisition is 6 months (longer if relocation is required).
  b) Project design completed early enough to allow for acquisition of utility parcels.
  c) Utility identifies properties needed for relocation and the schedule for relocation work.
  d) Utility willing to proceed with relocation work when ADOT obtains legal possession of property through court action.

♦ Positive identification of R/W to be acquired within corridor definition (30% Plans).
  a) Total and partial acquisitions identified.
  b) Right of way requirements should not change beyond the 30% stage.
  c) No parcels are added beyond the 30% stage.

♦ Include the following in the R/W schedule, especially for business / industrial takes:
  a) Relocation of owner, including payment for crops
     Minimum 90-day notice given to vacate acquired property.
     Complex business relocations can take several months to complete, need sufficient lead-time.
     Begin working with businesses as early as possible.
     Need coordination and cooperation of local jurisdictions.
     (Cost to cure for farming ditches, crop damage, replacing landscaping, etc.)
  b) Residential relocations, owner-occupants and tenants
     Minimum 90-day notice given to vacate acquired property.
     Includes assistance to displaced occupants of mobile homes as well as conventional housing. Qualified persons are eligible for reimbursement of moving and related costs and for replacement housing payments. Comparable replacement housing must be available to displaced persons.
  c) Qualifying replacement housing must meet Decent, Safe, and Sanitary standards and conform with local codes
  d) Clearance of HazMat

Coordinated with ADOT Environmental Planning Group who arranges for removal of items at issue.
Often requires involvement and certification of ADEQ.

e) Demolition or removal of structures
All structures must be tested for presence of asbestos containing materials.
Asbestos must be removed by qualified contractor prior to demolition.
Demolition contractor obtains permits from local jurisdiction.
ADOT working under conditions of Consent Decree with EPA.

f) Develop a policy for acquisition of additional right of way at the utility company request. (new Legislation (ARS 28-7092,B,6) -can purchase R/W if utility has prior rights)

- Local government contribution

g) Local jurisdiction coordinates donation of right of way from developers through zoning process.
h) Local jurisdiction acquires right of way with their funds.
i) Local jurisdiction provides staff for negotiations with property owners for purchase of right of way and relocation assistance.

- Advance Acquisition

j) Red Letter process with local jurisdictions, to forestall development in project corridor.
k) Advance acquisition to alleviate a hardship.
l) Must be able to confirm that the property is needed and that funding is available.

DISPOSAL OF LAND

(Maintenance)

- ADOT Right-of-way Section maintains property acquired for project until needed for construction.

a) Leases properties in the interim.
b) Maintains appearance of vacant properties by cleaning off weeds, trash, etc. and stabilizing dust.

- Sell property deemed not needed for highway purposes.

c) Property sold to public at auction.
d) Sold to abutting owner under certain circumstances.
e) Sold at or above fair market value.

- Property owners may have repurchase rights-right of first refusal per ARS 28-7099 (ADOT compensation, auto reversion)
- Turn-back policy: Abandon, vacate easement or transfer ownership of roadway
- Responsible for dust stabilization on acquired unimproved properties prior to construction or disposal.

f) Implement an action plan for control of PM-10 category particulates.
g) Includes weed abatement and control of dust on disturbed vacant lots.

h) Maintain an inventory of all eligible properties, status of properties, and mitigation measures employed.

- ADOT must consider any and all utilities existing on or across the property.

- **LAND USE PLANNING**

- Residential – "Buffer-zones" adjacent to freeway R/W - Set back requirements to locate residence further from freeway are advisable.
- Buffer Zones are ideal locations for utilities and/or on-site drainage retention basins or channels.
- Red Letter Policy – Local Government notification to ADOT of proposed (R/W Project Manager is assigned to this and works with Const. Project Manager) development that could impact freeway or vice versa.

Recommendation

- ADOT recommends local governments require developers to provide visual and noise mitigation adjacent to existing or planned freeway corridors that do not qualify for mitigation by ADOT.

- **TRAFFIC ENGINEERING**

CROSSROADS

- Access control permits on crossroad is 300 feet desirable COA .
- The access control limits along an urban interchange crossroad of a fully access controlled freeway shall extend a minimum of 300 feet beyond the ramp radius returns on the crossroads. This is revised from the 100 feet previously required in urban areas. When the crossroad is skewed, it is desirable to set the access control limits opposite at the same crossroad station with the limit furthest from the mainline as the control. (Changed July 30, 2001; Roadway Design Guidelines; Crossroads – Section 506)
  - If 300' cannot be achieved, COA limits 100' minimum with right-turn in and right-turn out at driveways/streets between 100' & 300' mark.
  - If the COA is 300 feet then there will not be any access allowed. If the COA is less (100 feet is the minimum) then a right in and right out access may be considered depending on the location
- Placement of potential hazardous features on cross-roads and frontage roads should address sight distance and clear zone criteria
- Sight distance requirements must be checked to ensure that safety needs are being met. Obstruction within the clear zone must be protected (i.e. guardrail, sand barrels, etc.) Sight distance and clear zone requirements can be found in the AASHTO "A Policy on Geometric Design of Highway and Streets" 2001 (Green Book) and ADOT's "Roadway Design Guidelines" Manual Sections 200 and 400.
  - The criteria for median openings outlined in the Traffic Engineering Policies, Guidelines and Procedures Manual; Policy 1060, Median Openings, requires 660 feet of separation in the Urban area. The

measurement is taken from radius to radius (or bull nose to bull nose). If access granted between openings then it would be required to be right in and right out.

- Acceleration and deceleration lanes per ADOT's Traffic Impact Guidelines.
- The design criteria for acceleration and deceleration lanes are outlined in ADOT's "Roadway Design Guidelines" Manual section 400. Also a letter dated February 22, 2000 from Mr. George Chin, Phoenix Regional Traffic Engineer, specifies that the storage length for left turn lanes and right turn lanes to be 300 and 200 feet respectively

♦ Recommended signal spacing is 1320 feet (+/- 1/4 mile {min}) to optimize signal progression. To coordinate timing, a signal inter-connect is required.

- 1320 feet is desirable, less may be considered depending on street spacing or business access. Signal inter-connect is reqired for closely spaced signals within half mile of freeway interchanges.

♦ Signing issues – compatible with MUTCD and ADOT policy

- All signing must meet the requirements in the MUTCD and the ADOT Manual of Approved signs. Any proposed signing must be reviewed and approved by the Regional Traffic Engineer and the Traffic Design Section.

♦ Traffic signal (Installation, maintenance)

- Traffic signals can only be installed when one or more of the Warrants in the MUTCD are met and traffic operation and safety would be improved. Before installation an IGA must be in place as to who will install, maintain, and pay the energy.

♦ IGA for Maintenance & Lighting

- IGA will be drafted by the ADOT Project Manager

♦ Traffic control for local government or utility projects – within COA limits, requires an ADOT permit (ref. MUTCD & ADOT stds.) issued by the Phoenix Maintenance District.

- Traffic control plans must be reviewed by the Regional Traffic Engineer and approved. This will ensure that the standards in the MUTCD and ADOT guidelines are meet.

♦ Cross-road lighting:

- Lighting of crossroads is local government's responsibility; However, ADOT's policy is to replace in kind for existing lighting that is displaced by construction; ADOT will light new freeway intersections.
- ADOT will not light overhead crossroads signing in areas were there is existing lighting, unless by IGA the local government assumes the entire costs associated with the lighting.

♦ Bicycle policy – ADOT's Bicycle Policy dated March 1, 2002.

❑ **ENVIRONMENTAL**

NOISE MITIGATION

♦ Official noise policy – "Noise Abatement Policy" March 21, 2000.

- The National/FHWA policy is to consider noise mitigation when modeling predicts noise levels approaching or exceeding 67dBA.
- ADOT has chosen a more conservative policy of considering noise mitigation when predicted noise levels meet or exceed 64dBA. (This is currently the most conservative noise policy by any DOT in the US)

♦ A 12 minute noise video and brochure has been developed to explain the fundamentals of noise mitigation. This video is available to local governments.

♦ ADOT noise monitoring service for freeways is available – through Environmental Planning Services upon request.

♦ ADOT will provide technical assistance or guidance to local governments on noise related issues if requested.

♦ Set-backs, buffer zones, manner in which properties are sub-divided should be considered by local governments (for example, front of house towards freeway and backyard will be more enjoyable to resident – house would acts as a buffer to freeway noises). (Streets, drainage facilities or green-belt buffers adjacent to freeway R/W).

Recommendations

♦ Building permits – design of multi-story buildings; using double or triple pane glass, sound deadening materials in walls, & etc…(minimize openings on multi-story buildings on freeway side)

♦ Implement improvements that aid in noise mitigation

♦ Gilbert has a good noise ordinance as a model for other cities to consider. It requires developers to provide noise mitigation for new developments near existing or planned freeways, that don't qualify for noise mitigation from ADOT.

♦ ADOT recently changed the standard texturing of concrete pavement from transverse to longitudinal tining as a slightly quieter pavement surface.

♦ ARFC overlay (rubberized asphalt) is under study as a future noise mitigation strategy

♦ ADOT is researching physics (measuring) behind sound
- Conducting research on atmospheric conditions and their relationship to noise propagation.

♦ ADOT sound barriers are modeled and designed for 20 year traffic projections (freeway near capacity) at the anticipated noisiest conditions.

♦ ADOT sound barriers are currently being built with consideration of future expansion. (Offset for future widening possibility and able to support height extension without reconstruction)

♦ ADOT requires contractor's schedule sound wall/barriers to be built early in the construction phasing where feasible.

♦ Construction activities
- Work hours – work plan – cycling of trucks/equipment to minimize noise from OSHA required back-up alarms

- Stationary equipment – manufactures specifications

♦ ADOT recommends eliminating the "double-wall" effect (caused by parallel privacy walls & noise barrier walls) for improved visibility and security. ADOT has been successful replacing privacy walls with noise walls at/near the right-of-way line through temporary construction easements (TCE) with neighbors

AIR QUALITY

♦ Vacant section of undeveloped land (wind, car sales)
  - Recommend land should be treated – dust palliative
  - Recommend seeding & vegetation of land
♦ MAG performs air quality conformity analysis for the region.
♦ ADOT performs project level assessment through the NEPA process
♦ More information on air quality issues is addressed on the ADOT and MAG Web-sites
♦ ADOT typically schedules landscaping projects to begin 2 to 4 months after freeway construction to minimize erosion of dirt slopes and dust control. Natural plant seeding may be used as a temporary control measure if permanent landscaping is delayed.

CONSTRUCTION ACTIVITIES

♦ Maricopa County is the enforcement agency for air quality PM-10/dust and County "Rule 310" is the guiding document for dust control, hauling, & construction sites which includes:
  - Tarp loads
  - Rock pads or jiggle bars at exit points
  - Pre-wet material prior to excavation to minimize fugitive dust.
  - Fog spray during excavation and loading
  - Street sweeper on haul routes
♦ On-site erosion control is governed by Federal and State NPDES (National Pollution Discharge Elimination System) requirements.
♦ SWPPP (Storm Water Pollution Prevention Plan) – are developed on all major projects and updated monthly
♦ Noise mitigation during construction:
  - Restricted work hours adjacent to residential area where feasible.
  - Proper equipment maintenance (muffler, etc…)
  - Temporary sound enclosures or noise walls of temporary equipment like light plants or generators.
  - Require sound walls and berms as early work items where feasible.
♦ Air quality
  - Diesel idling rule – Per Maricopa County's Vehicle Idling Ordinance. (Reference Manual; Book II, Noise Policy)
  - Rule 310 adherence
♦ Drainage – first flush as defined by County. First flush contaminates is the local governments' or developers' responsibility with on-site

retention. Bleed-off **after** first flush to ADOT retention basin or channels can be considered under an ADOT permit.

- **CONSTRUCTION COORDINATION**

- Major hauling activities must be coordinated with local government restrictions considering peak daytime traffic periods on arterial streets vs. noise nuisances for neighbors at night.
- Right-of-way – special conditions negotiated by the Right of Way Agent are reviewed and approved by the ADOT Project Manager, District Engineer, and others as required before they are formalized. These conditions are forwarded to Resident Engineer, etc. for reference and inclusion into the construction project.
- Project elements that are requested and funded by local jurisdictions require inspection and QA coordination to allow acceptance and maintenance responsibilities to be shifted to local jurisdiction upon completion.
- Utility shutdowns must be coordinated with utility companies for relocations and selected construction activities.
- Traffic – restrictions on shutdowns, detours, must be coordinated with local governments for development of traffic control plans and bid restrictions.
- Identify streetlight ownership and notify prior to outage.
- Traffic Signal maintenance by local government through IGA or by ADOT. Coordinate with local governments
- Control light plant locations for noise and light spill-over into neighborhoods
- Restrict certain excessively noisy machines (pavement breakers or hydraulic hammers) from nighttime work. Adjacent to residential neighborhoods, if feasible.

- **DESIGN COORDINATION**

- Drainage (on-site vs. off-site drainage activities) – Per Roadway Design Guidelines Page 600-5 Table 603.2B. Crossroad improvements within ADOT's R/W (TI's) are designed for 10 year storm events.
- Right-of-way - R/W coordinators attend all project meetings and are part of the project team headed by the Project Manager. They provide input to decisions affecting the right of way acquisition process. Early identification of surplus property to determine final R/W fencing, landscaping strategies, and disposal potential.
- ADOT Enhancement policy requires that special fencing, increased landscaping, special architectural treatments must be funded and maintained by local governments. (ref. ARS28-6351 & 28-6353)
- Future expandability – ADOT designs basic freeway system for possible expansion of future HOV lanes in medians and one or more basic lane widening to outside for an ultimate cross-section.

Recommendations

- R/W involved at the earliest possible time.

a) Early input on right of way issues can defer problems later in design.
b) Right of Way can begin early acquisition of some right of way parcels.
c) Early and continuous design coordination with local governments through monthly project/corridor coordination meetings. All major scope issues must be resolved by 30% design.
d) Local Government funded enhancements must receive conceptual approval by 60% design to avoid project delay.

- **UTILITY COORDINATION**

- ADOT owned utilities – electrical, FMS (Freeway Management System)
- Agency owned utilities, sewer, gas, water
- Private/public utilities (water, sewer, power, telephone, natural gas, telecommunication, & etc…)
- Privately owned utilities (irrigation & junction structures, trailer parks, municipal systems, etc.) HOA's.
- Within COA limits, manholes, valve boxes should be placed outside of traffic lanes on crossroads to minimize traffic disruptions for maintenance operations and smoother pavements. Valves and manholes can be located in median areas or back of (or in) sidewalk areas.
- Access to all utilities within the R/W must be from outside Control of Access (COA) limits.
- Pressurized liquids crossing the R/W must be sleeved.
- Encourage use of reclaimed water from local government for watering freeway plants. Reclaimed waterlines within or immediately adjacent to freeway R/W can be considered.
- No longitudinal utilities are allowed within the Controlled Access right-of-way.
- Transverse utility crossings of ADOT COA freeway corridors are allowed under a no cost permit.
- Utility Corridors for future utilities on local streets vs. paralleling freeway corridor. Utilities located immediately outside COA limits cause serious problems and increase costs for future freeway expansion.
- Right-of-way availability for utilities must assume that Escrow or O.I.P. (Order of Immediate Possession) is in place, crops and businesses have been terminated, haz-mat and archeological exploration have been completed, demolition has taken place, etc.
- Utility outage availability must be considered, whether for public or private utilities. (water, power, gas, closures during peak hour – Special Provisions)

- Arrangements to deliver "as-built" drawings to the owner must be made for utilities constructed by ADOT for others.
- Use of common electrical service points is encouraged for signals, irrigation, lighting, FMS, pumps, etc.

COMMUNITY RELATIONS

ADOT's Community Relations is responsible for:

- Public information to news media, citizens and stakeholders about the regional freeway system activities.
- Distribution of joint ADOT & local government special events as they relate to the regional freeway system and host public tours in conjunction with opening sections of freeway.
- Corridor construction updates about the location, design, construction schedule, cost and project contacts distributed to local cities, chambers of commerce, realty associations and neighborhoods surrounding each freeway corridor.
- Local communication to inform drivers, area residents and stakeholders about design and construction progress.
- Project specific communication to residents and businesses adjacent to the freeway corridor about specific construction issues or impacts. (via door hangers, letters, flyers, and neighborhood meetings)
- Transportation System Management Committee meetings are targeted at reviewing construction progress, inform local cities and stakeholders about construction activities, and coordinate any construction-related traffic control issues.

MAINTENANCE

- Roadway maintenance of cross-roads – Local Government's responsibility outside COA limits and cross-roads (through IGA)
  - For routine maintenance; sweeping, striping minor repairs as defined in the ADOT maintenance responsibilities checklist.
  - ADOT responsible for major maintenance within COA limits on crossroads. (Division is usually PCCP/AC line) Major maintenance normally means pavement mill & fill operations. Also, major maintenance may mean spot pavement repair and repair of spalled, severely raveled or rutted roadway sections. Normal crack filling and patch of potholes and seal and fog coats would be the responsibility of the local government where applicable.
  - Ground maintenance regulatory signs. Most of the ground mount signs are reviewed at least annually for condition. If they need replacement, they are replaced. If they need preventative maintenance work, they are maintained. However, there are call out conditions for sign replacement. An example is a stop sign. This would need to occur within a 1.5-hour's period after the call out. Inspections occur on a regular basis during the day and at night to insure the quality of the signs in place.

- Sweeping Most ADOT roadways are swept on a weekly time interval (dependent upon budget). There are areas that require more frequent sweeping and spot sweeping needs that are done on “a call out basis”.
- Traffic Signals & lighting, These are reviewed on an interval basis that ranges from once every 5 years to every 4 months depending on the particular items involved. Most of this type of equipment needs to be reviewed at least 2 to 4 times per year. Applicable replacement of bulbs, LED’s and other replaceable items is on an as-needed basis. Most other activities are twice per year. Repair activities for safety sensitive devices must occur within a 1.5 hours time period.
- Striping, Most of the striped areas are re-striped on a one year striping interval. Some high wear areas need re-striping more often (every 6 months + -)
- Frontage roads – gore (solid white line “painted” at on /off ramp) to gore are maintained by local governments. This means from the gore point on the on-ramp to the gore point on the off-ramp.
- Local street connections – transfer to local government upon completion of project

♦ Landscape maintenance – Freeway landscape irrigation water is supplied by local government. (per MAG Policy)

♦ Normally, the landscape irrigation water has been City water but recently, developments have taken place that sometimes allow reclaimed water to be used for landscaping purposes in certain areas within specified limits.

♦ Landscape maintenance, Landscape maintenance activities depend, a lot on the appearance of the landscaped section. There are numerous activities including irrigation system inspection and repair that need to be accomplished on an annual basis. However, there are many times that leaks or broken lines or inoperative emitters that need immediate repair. Other landscape activities such as trimming of trees for sight distance, removal of trees within the clear zone (typically within 30’-35’ from edge of traveled lane) and groundcover trimming for sight distance may occur due to a call out. However, normal landscape maintenance is on an appearance or as needed basis. Some items such as erosion and weed control must occur immediately prior to or after a storm runoff event.

♦ Litter control generally conducted by corporate sponsorship, prison labor and contractors on urban freeways. Normal litter pick-up intervals are approximately weekly except in the volunteer areas (rural highways) which are planned to be 4 times a year.

♦ Interval

- Standards of frequency for maintenance activities, Most of the maintenance activities herein are mentioned along with the recommended interval for the activity. Some vary due to their intermittent nature. Where applicable, the Maintenance Activity list and Responsibility allocation list will be the guide

♦ Utility / ADOT Maintenance Section Access within Controlled Access

- Permitting process, The permitting process controls work performed by other entities within the ADOT Right of Way and may be applicable to access, utility installation or modifications, roadway and traffic control modifications and major development construction and connections to be made to ADOT facilities. It usually takes from 3 to 5 weeks to obtain a permit (depending on complexity and backlog). Permits may range in size from work requiring a few hundred dollars to large projects. Therefore, the range of activity for issuing a permit can be very simple to very complex.
  (ADOT permit required to work within ADOT right-of-way – all but emergency repairs are restricted to off-peak traffic periods)
- SRP, APS, SwGas, etc…

♦ Local Government Permitting; Coordination of permitting, On certain facilities and by agreement, ADOT may allow the local government to issue permits for the facility. When and if this occurs, the local government should keep ADOT informed of all permits issued, their location, and their potential impact on future development of the roadway corridor involved.

- Enhancements defined by ARS 28-6351 & 6353

♦ Fences, railings, landform graphics, art elements, specialized lighting/fixtures should follow the enhancement policy of funding and maintenance by local government for improvement district.

❑ **REGIONAL FREEWAY SYSTEM LANDSCAPE GENERAL GUIDELINES**

Landscaped streets and freeways add to Arizona's image as a scenic state with a high quality of life. Landscaped freeways provide a positive community and neighborhood image, attract visitors and businesses and enhance the acceptance of transportation facilities by citizens. Landscaped freeways result in transportation corridors that are compatible with community landscape and aesthetic requirements for the land uses adjacent to and traversed by the freeway.

♦ Regional Freeway Landscape and irrigation construction project costs are programmed at $27,000 per acre or approximately $850,000/mile (2002) for landscaped area within the freeway right of way.

♦ A flexible approach to landscaping is maintained that allows adjacent cities to fund increased plant size and density and aesthetic enhancements. This approach allows a municipality to highlight a gateway, provide additional screening for a neighborhood or increase density and plant sizes along a frontage road. ADOT retains responsibility for maintaining continuity and appropriateness of landscape treatments.

♦ ADOT applies a visual prioritization process (VPP) to the design of landscape architectural treatments. The VPP considers visual mitigation requirements and allows the use of plant materials and land graphics and aesthetic treatments according the their visibility and effectiveness of the design.

- Topsoil plating (typically 2 feet thick), water and electrical power connections and irrigation sleeving are included in the roadway construction budget and completed with the roadway project.
- Landscape Architectural elements are designed and constructed within the freeway right of way by ADOT. Maintenance of the landscaping within the freeway right of way control of access is by the ADOT, outside the freeway control of access is by the city through an IGA.
- Water, potable or reclaimed for landscape planting maintenance is furnished to the right of way at the pressure and quantity required for the operation of the drip irrigation system and plant maintenance. Water is at no cost to the state for freeway right of way area within and outside the control of access per MAG policy.

FUNDING/FINANCIAL

- Innovative funding strategies include GANS, SIBS (HELP loans), cost sharing, local government funding, acceleration local government loans, & Enhancement funds
- Funding strategies include advanced R/W acquisitions for early utility relocations.
- Local Government or developer contributions are encouraged to help defray freeway costs and/or accelerate projects..

IGA AGREEMENTS

- Landscape maintenance outside COA limits is typically by local government.
- Routine road maintenance; at crossroads and frontage roads and sign maintenance is typically done by local governments.
- Relocations of city owned utilities that qualify for prior rights are covered in IGA or utility agreements.

CONCLUSION

This document is to be utilized as a point of reference and informational, if there are any comments, questions, issues, or concerns with this document please contact Andrew Smith at (602) 712-7870 or agsmith@dot.state.az.us .

FREEWAY COORDINATION ISSUES & STRATEGIES
For
TRANSPORTATION PLANNING

ARIZONA DEPARTMENT OF TRANSPORTATION
REFERENCE MATERIAL

BOOK I

ADOT Construction & Design standards	May 1996
ADOT Enhancement Policy (Per ARS 28-6353)	March 1999

BOOK II

ADOT Policies, Guides, Procedures	January 2000
Traffic Impact Analysis Guidelines	April 1999
MAG Network Signing Issues	January 1992
ADOT Noise Abatement Policy	March 2000
ADOT Right-of-way guidelines	January 2001
ADOT Bicycle Policy	March 2002
ADOT Board Policies (DRAFT)	2002

Not included in Book I or II

Manual of Unified Traffic Control Devices	(current edition)

ARIZONA DEPARTMENT OF TRANSPORTATION
CONTACT INFORMATION

Director's Office	(602) 712-7227
Directors Support (MAG Regional Freeways)	712-8306
State Engineer's Office	712-8275
Phoenix District Construction	712-8965
Phoenix District Maintenance	712-6664
Phoenix Regional Traffic	712-7193
Traffic Group (Statewide)	712-7766
Environmental Planning	712-7760
Air Quality Section	712-6732
Roadway Design	712-8667
Roadside Development	712-7357
Right-of-way Group	712-7316
Utility Coordination (MAG Region)	712-7193
Transportation Planning Division	712-7333
Maricopa Association of Governments (MAG)	(602) 254-6300